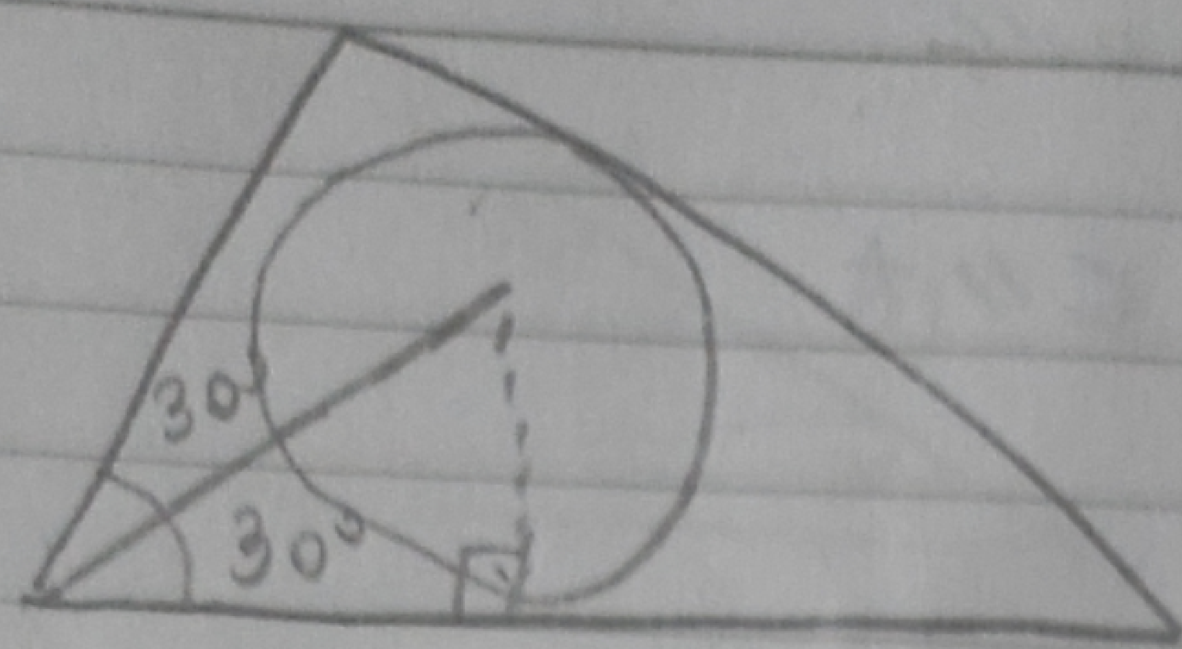
Tarefa Básica ETIM 350

/ /

1)

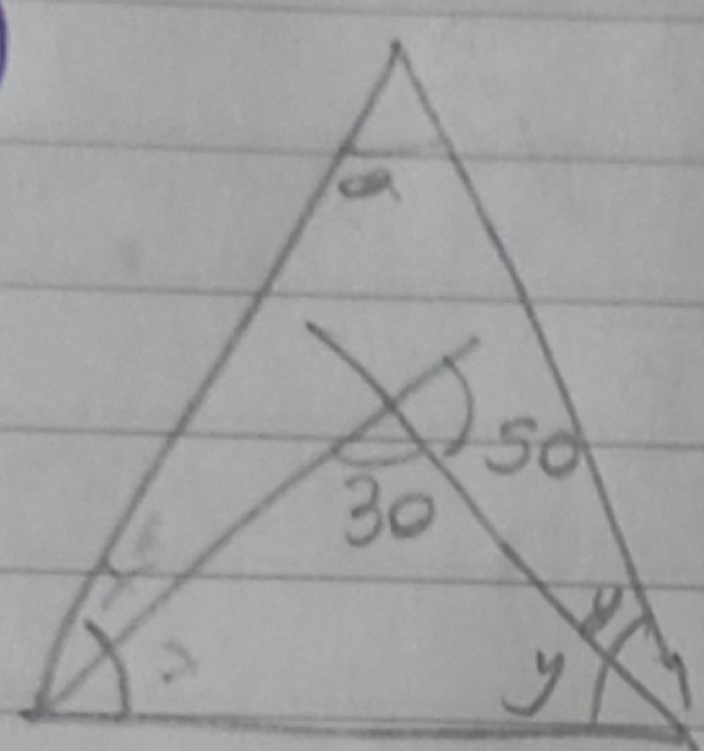


$\text{sen } 30° = \frac{1}{H}$

$\frac{1}{2} = \frac{1}{H} \rightarrow H = 2$ //

Alternativa D

2)



$x + y = 180° - 130°$
$x + y = 50°$

$130° = 50° + a \rightarrow a = 80°$

Alternativa E

3) Resposta: Letra E) ✓

Visto que:

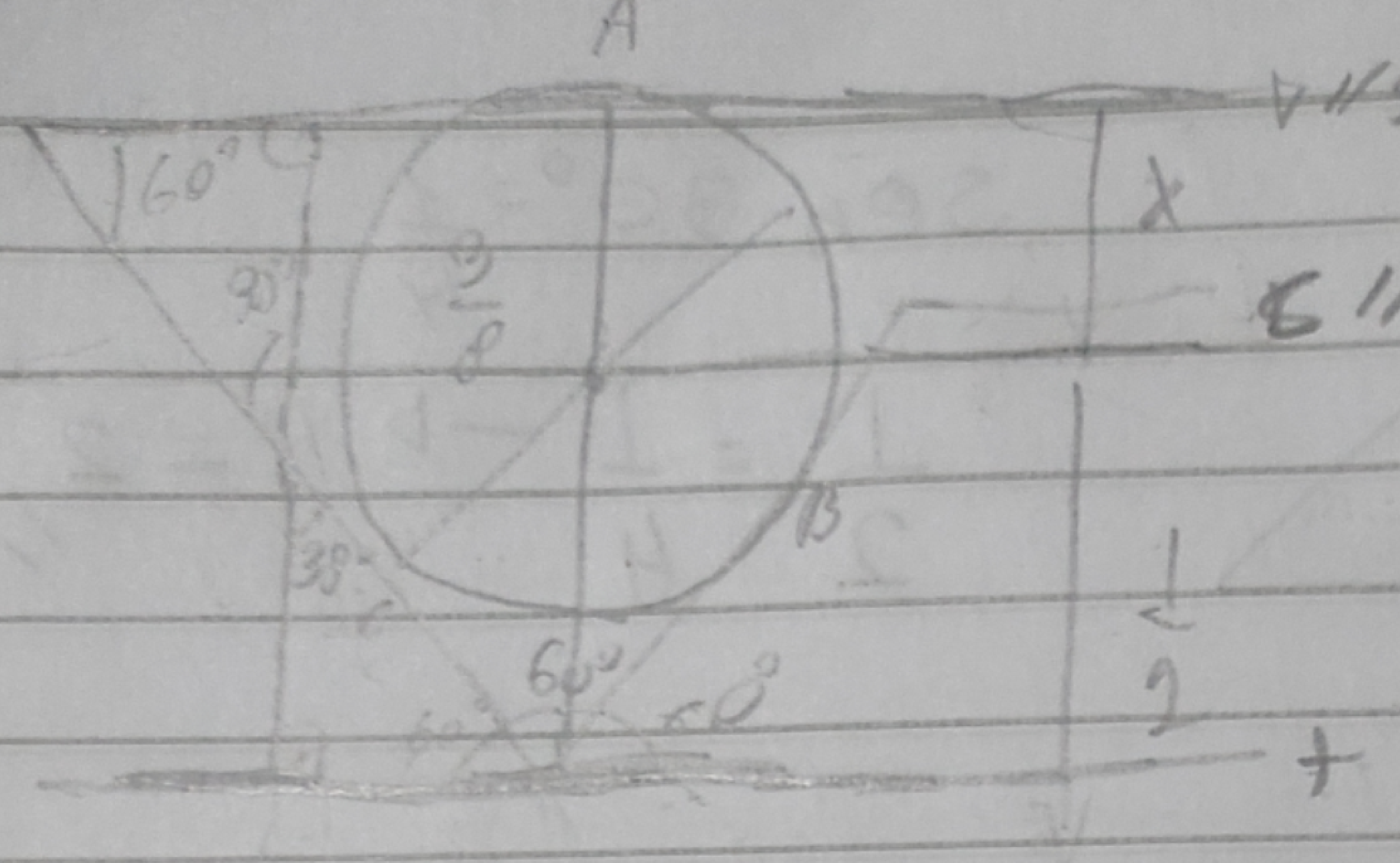
A) Seria possível se os pontos A e B estivessem próximo ao ponto C

B) Dados insuficientes

C) Seria possível se os pontos A e B estivessem próximo ao ponto C.

D) Caso A e B estejam na mesma distância de C, tendo assim a possibilidade de ter uma reta passando por meio dos pontos

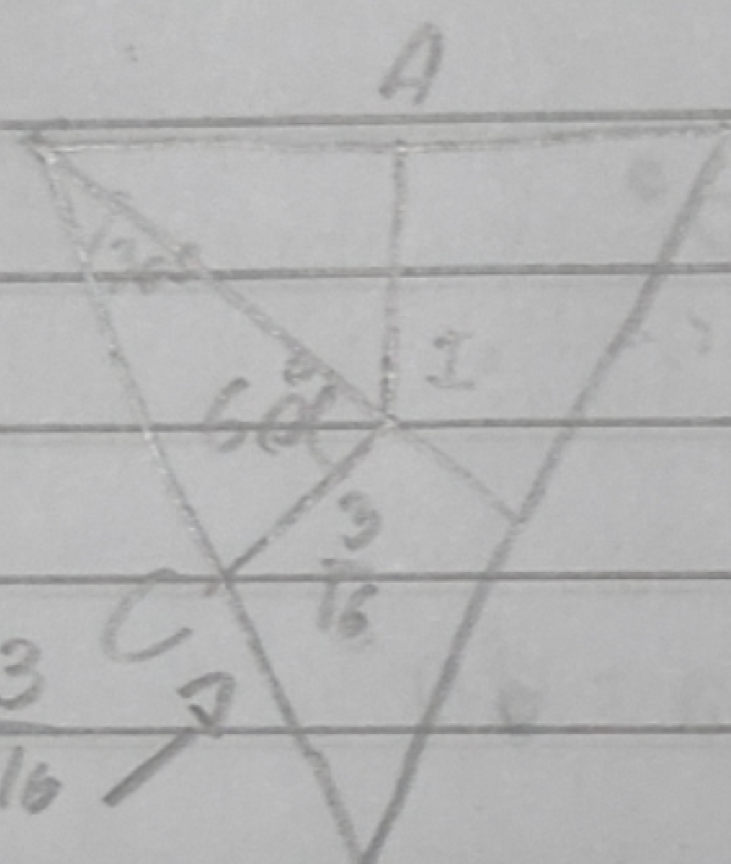
4)



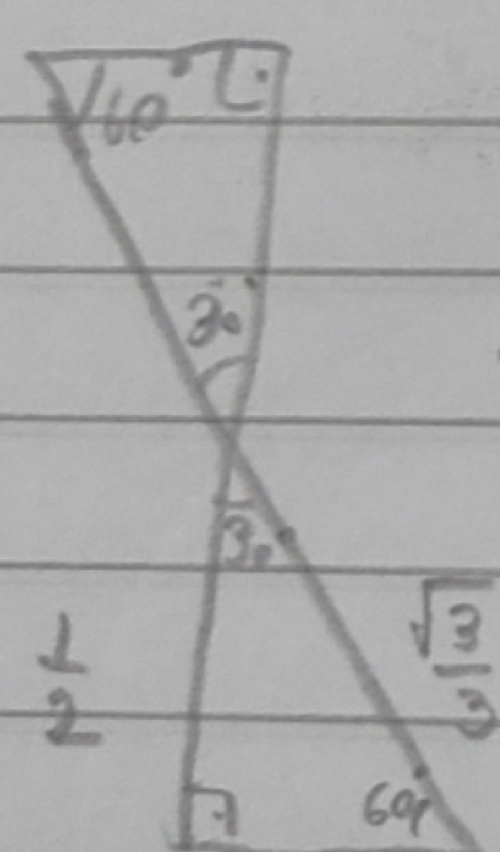
$\tan 60° = \frac{CO}{\frac{3}{16}} \rightarrow CO = \sqrt{3} \cdot \frac{3}{16}$

$\frac{3}{8} : 2$

$\frac{3}{8} \cdot \frac{1}{2} = \frac{3}{16}$



$CO = \frac{3\sqrt{3}}{16}$



$\rightarrow \operatorname{Sen} 60° = \frac{\frac{1}{2}}{H} = \frac{\sqrt{3}}{2} = \frac{1}{2} \cdot \frac{1}{H} \rightarrow \frac{\sqrt{3}}{2} = \frac{1}{2H}$

$2H\sqrt{3} = 2 \rightarrow H = \frac{1}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} \rightarrow H = \frac{\sqrt{3}}{3}$

$2 \cdot \frac{3\sqrt{3}}{16} \rightarrow \frac{3\sqrt{3}}{8}$ | $\frac{3\sqrt{3}}{8} - \frac{\sqrt{3}}{3} \rightarrow \frac{9\sqrt{3} - 8\sqrt{3}}{24}$

$\rightarrow \frac{1\sqrt{3}}{24}$

$\operatorname{Sen} 60° = \frac{CO}{\frac{1\sqrt{3}}{24}} \rightarrow CO = \frac{\sqrt{3}}{2} \cdot \frac{\sqrt{3}}{24} \rightarrow CO = \frac{3}{48} \begin{matrix} :3 \\ :3 \end{matrix} \rightarrow \boxed{CO = \frac{1}{16}}$

Alternativa Letra E)

tilibra

$A\hat{B}M = N\hat{B}C = 45°$

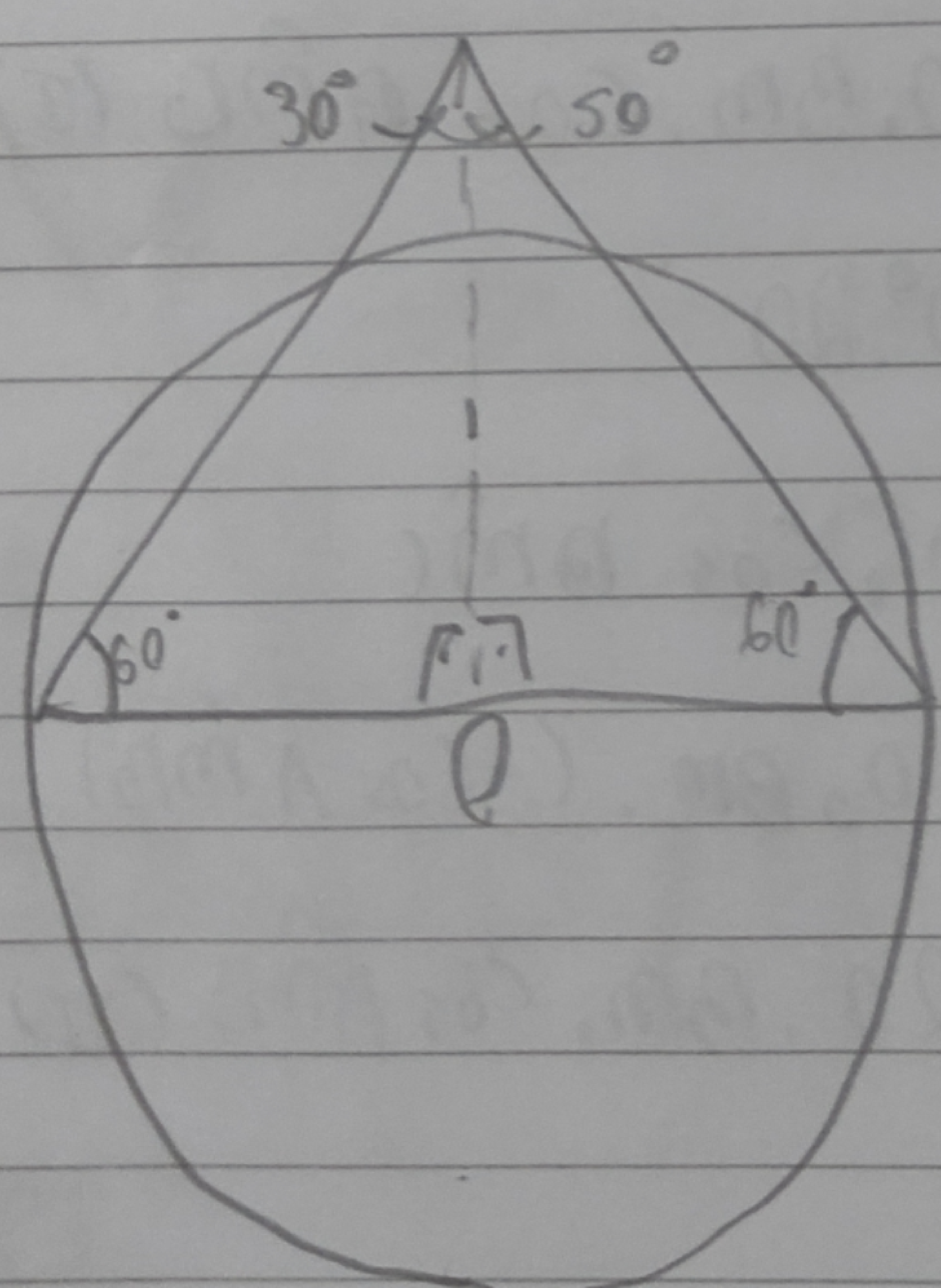
$\frac{BM}{sen\,20°} = \frac{MC}{sen\,M\hat{B}C} \to \frac{10}{sen\,20°} = \frac{10}{sen\,M\hat{B}C}$

$\to 10 \cdot sen\,M\hat{B}C = 10 \cdot sen\,20° \to sen\,M\hat{B}C = sen\,20°$

$\hookrightarrow 20°$

$45° = M\hat{B}N + 20° \to \boxed{M\hat{B}N = 25°}$

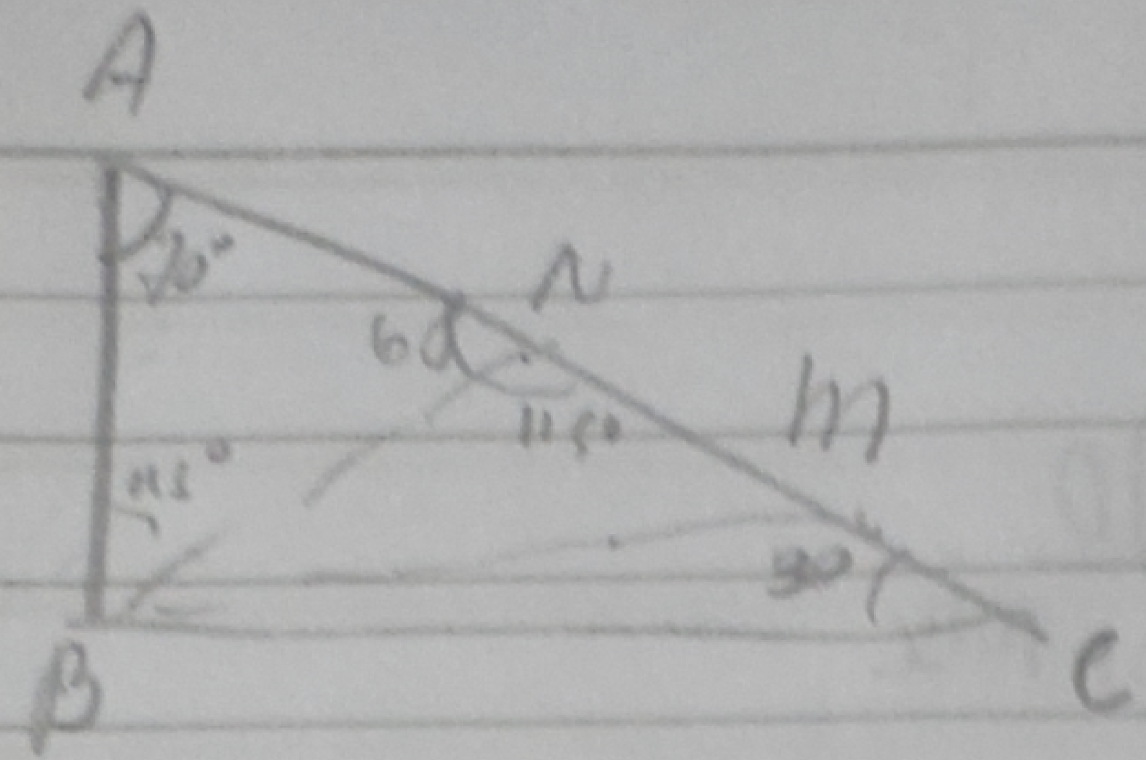
6.



$sen\,30° = \frac{r}{PO} \to \frac{1}{2} = \frac{r}{PO} \to \boxed{PO = 2r}$

$\boxed{\text{Alternativa C}}$

5)



$\overline{AB} = 20\,cm$

$\overline{AM} = \overline{MC} = 10\,cm$

$\cos 70^\circ = \frac{AB}{20} \rightarrow AB = \cos 70^\circ . 20$

$AB^2 = AM^2 + BM^2 - 2 . BM . \cos A\hat{M}B$

$(\cos 70^\circ . 20)^2 = 10^2 + BM^2 - 2.10.BM.\cos A\hat{M}B$

$(\cos 70^\circ)^2 . 400 = 100 + BM^2 - 20.BM.\cos A\hat{M}B \; (I)$

$\operatorname{sen} 70^\circ = \frac{BC}{20} \rightarrow BC = \operatorname{sen} 70^\circ . 20$

$BC^2 = MC^2 + BM^2 - 2 . MC . BM . \cos B\hat{M}C$

$(20 . \operatorname{sen} 70^\circ)^2 = 10^2 + BM^2 - 2 . 10 . BM . (-\cos A\hat{M}B)$

$(\operatorname{sen} 70^\circ)^2 . 400 = 100 + BM^2 + 20 . BM . \cos A\hat{M}B \; (II)$

$I + II$

$(\cos 70^\circ)^2 . 400 + (\operatorname{sen} 70^\circ)^2 . 400 = 100 + BM^2 - 20 . BM . \cos A\hat{M}B + 100 + BM^2 + 20 . BM . \cos A\hat{M}B \rightarrow$

$400((\cos 70^\circ)^2 + (\operatorname{sen} 70^\circ)^2) = 200 + 2 . BM^2 \rightarrow 400 = 200 + 2 . BM^2$

$200 = 2 BM^2 \rightarrow BM^2 = 100 \rightarrow BM = 10\,cm.$